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Corps reaches out to help others

Army Corps of Engineers quality assurance inspectors monitor contractor work during clean-up of tornado debris in Oklahoma.

This is a typical tent city that shelters Albanian refugees in the former Yugoslavian Republic of Macedonia.

USACE assists with Oklahoma recovery

Article and Photo
By Judy Marsicano
Fort Worth District

For the second time in four years, the U.S. Army Corps of Engineers is lending disaster aid to Oklahoma, this time after numerous tornadoes, storms, and floods ripped through 18 counties, killing 44 people, injuring 800 and leaving nearly 8,000 families homeless.

The tornadoes, as many as 50, spun through the middle of the state, wiping out whole communities, staying on the ground for nearly four hours. A giant twister, classified as an F-5 but bordering on an unheard-of F-6, cut a half-mile-wide swath through Oklahoma City and its suburbs with record-setting winds that reached 318 mph at the height of its destruction.

The bombing of the federal building in Oklahoma City on April 19, 1995, was the last disaster that brought Corps personnel to the area.

Watching 'Noah's Ark.' Tulsa District's Tom Logsdon, Assistant Chief of Engineering and Construction, was watching *Noah's Ark* at his home in Tulsa on May 3 when news that a massive tornado had hit Oklahoma City and was moving toward Tulsa interrupted the movie. Having had previous experience with disasters, including hurricanes, tornadoes, and floods, Logsdon immediately called the district's Emergency Operations Center (EOC), which had already been activated.

"Since our first mission was to mobilize, I reported to the EOC, where we tracked the storm as it moved through each county," Logsdon said.

By 1 a.m. on May 4, the storms had cleared and he headed for ground zero, Oklahoma City, to meet with Federal Emergency Management Agency (FEMA) and state officials. He reached the town of Stroud, outside of Oklahoma City, and, just as he feared, the damage was so extensive he had to find a detour around the path of destruction.

Destruction. "Even in the dark, I could see debris everywhere," Logsdon said. "Cars and trucks were totally demolished, some wrapped around trees, others standing on end in the middle of where homes used to be. Hotels where I had stayed were gone and second floors of apartment buildings were lifted right off. I knew right away the road to recovery would be a long one."

Meanwhile, survey crews of park rangers from lakes scattered across

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District aids refugees in U.S. and Balkans

Article by Vince Elias
Photo by Maj. Steven Baker
New York District

Since Operation Joint Guardian/Allied Force began in the Balkans, New York District has worked on both sides of the Atlantic to support Kosovo refugee humanitarian efforts. At Fort Dix, N.J., the district helped plan for the arrival of Albanian refugees, and laid plans for a proposed trailer camp. Overseas, district people work with the Immigration and Naturalization Service (INS) to build camps to process refugees for flights to the U.S.

On May 5, the first plane-load of 400 ethnic Albanian refugees landed at McGuire Air Force Base, N.J. Before they arrived, John Chew of New York District's Engineering Staff worked at Fort Dix with the fort's Project Manager, Alan Williams, Sr., to develop a cost estimate for housing requirements.

Also on May 5, Joint Task Force (JTF) 350 arrived at Fort Dix to establish a command led by Brig. Gen. Mitchell Zais and made up of soldiers from the U.S Army Reserve Center, Forces Command, and 18th Airborne Corps (1st COSCOM).

Maj. Gwen Baker of the districts' Resident Office met with the JTF Engineer Cell and the JTF Contracting Officer, Maj. Ted Epple. They, along with Chew, Williams, and the rest of the engineering team, developed a cost estimate for a trailer camp, determined the scope of work, drew a preliminary site layout, and compiled a list of potential contractors.

The trailer camp will be built if the incoming refugees overflow Fort Dix's barracks.

"Currently, the Army can house and support the camp by providing bedding for 4,200 refugees," said Baker. "That includes medical, dining, and recreation facilities. The Corps' trailer plan would provide a similar quality of life for the refugees while they await sponsorship."

Meanwhile, New York District continues to plan for potential deployments to the Balkans.

"North Atlantic Division is the lead division for mission planning and execution, and is requesting support to help staff the division Tactical Operations Center (TOC) and to identify personnel for potential deployment," said George Reyels, team leader of the district's Readiness Unit. "In connection with this planning activity, the Readiness Unit identified engineers, program managers, project managers, en-

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Chaplain's Column

Leaders must serve as well as lead

By Chaplain (Lt. Col.) Tim Carlson
Headquarters

Selfless service is one of the Army's seven core values. A true account from Desert Storm illustrates this ideal.

At the height of the conflict, after many grueling training exercises, a brigade received orders to prepare to move to the front. This meant cleaning equipment thoroughly in a very short time, which required working around the clock.

The unit's soldiers were extremely tired and their enthusiasm for this new task was very low. At about 11 p.m., the brigade commander began making his rounds. At 3 a.m., he arrived at a piece of equipment, noted the soldier's fatigue, and directed him to go get some sleep. He took over the soldier's task briefly, then continued his motor pool visit.

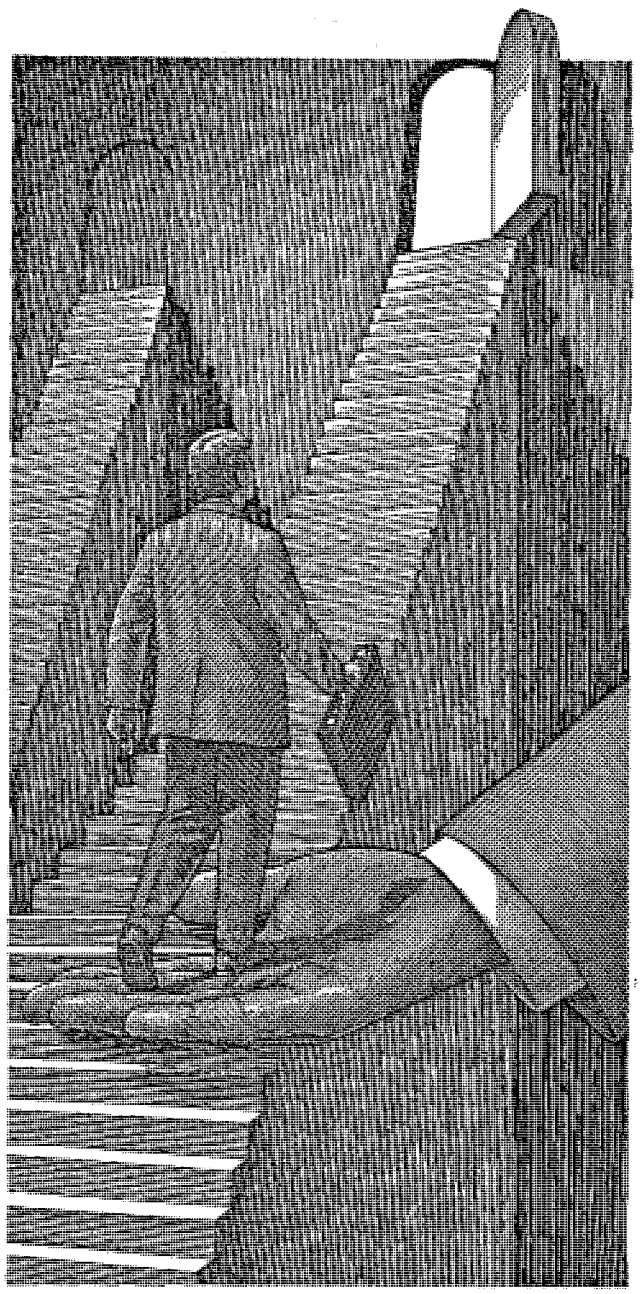
The commander's presence and direct involvement made a tremendous positive impression on his soldiers. He could have easily slept that night, resting on his authority, confident that his order to ready the equipment for an early dawn departure would be carried out.

Instead, he chose to be a servant-leader. There was their leader, sharing the same exhaustion and late hours, pitching in to help. His example proved his concern for his soldiers, and inspired them to carry on despite their fatigue.

During the past three decades, service to our nation has been strong, but the *motivation* to serve has changed. In the early 1960s, commitment to national defense and upholding America's values were major motivations to join the military. In the early 1970s, we began to lure quality men and women with promises of education and travel. But these enticements are losing their magnetism because today's soldier faces such high operational tempo, heavy TDY, and the demand of doing more with less day-to-day.

It is essential to find a new vision that captures the soul of our youth, and I firmly believe that *service to our nation* is that vision. A picture of being a servant for the good of the group is absolutely necessary. Without such vision and leadership, keeping a ready force will soon become an insurmountable challenge.

I recently visited Corps soldiers in Korea. Getting to Kimpo International in Seoul required almost 16 hours of flying from La Guardia in New York City. I was impressed with the flight attendants' preoccupation with service. They continually checked on the travelers' welfare, and gave special care to those in need, like the lady in the middle aisle who became



air-sick and needed care like a patient in a hospital.

With caring smiles and attentive responsiveness, this crew made a long flight bearable by being willing servants. I have no doubt that in the future I will ask to fly on this airline. They believe that service matters and their customers come first.

Is such an attitude toward military service possible in today's Army? I believe it is. The Army begins the process during Basic Combat Training (BCT). Throughout BCT, the recruits see the example of the drill sergeants, platoon leaders, and company commanders doing everything in their power to teach them to be soldiers.

BCT concludes with Victory Forge, a 72-hour field exercise where squads of recruits face tactical obstacles and team-building challenges in a realistic tactical environment. Victory Forge teaches and illustrates the full range of Army values, including selfless service. I believe that such commitment will reap short- and long-term rewards for the peace of America.

The military is one of the few remaining oligarchies, a form of government where power is vested in a few persons or in a ruling class. We place enormous power in the hands of a relatively small number of commanders. The choices these men and women make will largely determine our readiness posture into the next millenium. They may choose to command by power, and to distance themselves from their troops. They may choose to demand "bricks without straw" as the Pharaoh of Egypt did to the Isrealites 3,400 years ago. They may choose to distance themselves from the day-to-day demands of their soldiers.

While such decisions are the commanders' prerogative, they reduce retention of the work force. Such actions also blight readiness and aggravate an existing dilemma for our recruiters. Learning to be servant leaders is a growing demand that must be embraced fully by all effective leaders within our Corps and our U.S. Army. Without it, we will soon transition from the united to the self-directed. Such a transition to an autonomous focus would be disastrous for us.

The model of the brigade commander I first mentioned might inspire some to become a servant leader. For me, I think back to the man who led 12 others almost 2,000 years ago. One night, He had dinner with his disciples. In Palestine at that time, the roads were very dusty, and it was customary for a servant to wash the guests' feet. On this night, He took a basin and a towel and went from follower to follower and washed their feet. They never forgot this act of service. His servant leadership transformed the globe so that more than 2.5 billion of the Earth's inhabitants are now His followers.

What inspires your followers? How committed to our nation are those under your care? Are we willing to recommit ourselves to one of our most basic soldierly values — selfless service? If we are, then our preeminence as a world power will remain well into the next century.

Balkans

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vironmental scientists, biologists, contract specialists, real estate specialists, survey technicians, equipment operators, budget analysts, and administrative personnel who would like to volunteer."

There are 19 district volunteers for potential duty in the TOC, while the roster for possible deployment to the Balkans has 24.

The district's Human Resources (HR) office initially provided a list of volunteers with language skills. HR also coordinated with Security and Safety representatives to obtain required security and medical clearances and passports.

Some New York District people are already at work in the Balkans. Maj. Steven Baker is extensively involved in building crucial INS processing sites to support Kosovo refugees in Macedonia.

Baker has been deployed with the INS and Brown and Root Services, completing missions relating to refugee processing centers. He is using his technical and construction expertise to assist a multitude of work requirements for a long list of INS projects.

"We provided interface with active Army units," said Baker. "The processing sites are for the refugees who are going to the U.S."

At one INS camp, building wooden floors for tents is a big part of the project. Tables and chairs were also furnished, plus metal gates and interior lighting, using existing electrical power at the camp.

For the refugee processing facility at another site, a 1.5 kilometer (.93 mile) temporary one-lane road with two drainage culverts and two turnouts was built. A three-room addition was added to an existing wooden INS structure. The building also got electrical outlets, 15 light fixtures, and plumbing upgrades such as toilet fixtures, septic tanks, and connections.

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Engineers' future bright, demanding

Every year, we pause to observe the anniversary of our organization, celebrate our history and accomplishments, and prepare to meet the challenges of the future. We have much to celebrate. For 224 years, the U.S. Army Corps of Engineers has built a reputation of professionalism, integrity, and service to the nation.

During this past year, we continued to improve our reputation and build on our tradition of service. Whether responding to natural disasters, making major organizational changes, developing new business practices, or just conducting the day-to-day activities of the organizations, our team responded effectively to the needs of the nation.

When Hurricane Georges struck Puerto Rico and the Southeastern United States, our Corps' men and women were on the ground within hours, providing emergency water, ice, and power. Other members of our team followed Hurricane Mitch into Honduras and Central America to help devastated countries begin rebuilding. We responded to fires, floods, and other natural disasters throughout the country and, most recently, provided vital emergency support to recovery efforts following devastating tornadoes in Oklahoma.

Our USACE team is supporting our troops around the world as they fight for and maintain peace while providing a strong American presence abroad. We are providing vital support to our peacekeeping troops in Bosnia and Albania. We worked with the Eighth U.S. Army in Korea to clean up after heavy flooding damaged several U.S. camps. We continue to improve the ability of our servicemembers and DoD civilians to deploy while enhancing their quality of life through better living, training, and working facilities.

In addition to our many missions at home, we are called on to foster democracy and freedom abroad by supporting other nations in crucial infrastructure and natural resource developments. We have assisted others in Africa, Russia, Eastern Europe, the Caribbean, and Latin America.

We also made numerous changes in how we do business so we can better serve the customer. Our project managers are moving onto Army installations with the Directors of Public Works to provide more timely access to Corps resources. We set up our divisions as business centers to manage work and resources on a regional level. We made major changes in Military Programs and Research and Development to streamline the organizations and improve business practices. And, for the first time, we have a national reservation service so people can call, or web-surf, and reserve a Corps recreation facility anywhere in the country.

We should be proud of our past and our accomplishments, but we should also sharpen our focus on the future. We have a strong Vision to guide us and a foundation of 224 years of service to support us. I know that with the dedication and commitment of the Engineer Team, we will meet the challenges of next century and continue to grow as the world's premier public engineering organization.

ESSAYONS!

JOE N. BALLARD
Lieutenant General
Commanding

Commentary

Old methods no longer work

By Col. Michael J. Walsh
Sacramento District

There are a lot of people who are still not convinced there is a need for the business changes we are making. Many think things are fine and we don't need to make changes. If you're one of those people, let me spell it out for you.

The old system we used for many years *does not work any more!*

It may have been fine when we had captive customers, but it is *not* working today. We've had a declining military workload for quite awhile and we've eliminated positions as work has been lost.

Civil works is not immune, either. Recon and feasibility reports are usually late and go over budget. Sure, we do okay on the high priority/high visibility projects, but most of the others drift along with no active management making sure we meet our schedules, budgets, and keep the customer happy.

Ask yourself how common it is for our projects to go over budget or to miss deadlines. It is the *norm* rather than the exception, and that doesn't get the job done anymore.

The theme is clear to me and it must be clear to you, too. If you don't think changes are necessary, you're not paying attention to our customers. The customers are not satisfied with the service they get from the Corps and are going elsewhere. We must recapture the lost work by changing our processes to meet the customer's needs and expectations.

We are moving out with business changes to meet those needs and expectations. The Corps is transitioning from product delivery to *project* delivery. The entire organization must accept this.

The customer doesn't see a collection of products (design, real estate, counsel, environmental, regulatory, etc), they see *the entire project*. Customers don't care that a mix-up in communication between branches led to the budget being wrong and the project delayed. They only see the project costing more than we said it would, and that it is late.

The only way to transform to a project-focused organization is with strong project teams led by project managers. The managers must have the tools to manage and the full support of the organization.

The process we will use to manage projects to ensure that we take care of our customers is the Project Management Business Process (PMBP). We will need tools to support PMBP to make sure it works properly.

The Corps has a tool to manage funding – the Corps of Engineers Financial Management System. CEFMS is cumbersome, but it will ultimately give us the feedback and control over our budgets that we didn't have before. Taking care of the customer is not always easy with CEFMS, but it is necessary.

We also have tools to manage the project team and our timelines with PROMIS and MS Project. Those are the tools we have to use today. Yes, there might be more versatile and user-friendly tools if we just wait a few months.

Tools can always get better later. But we are out of "laters." We must implement PMBP *now*. It is the best tool we have *at this moment*. We must load projects into PROMIS and MS Project *now*. PMBP, CEFMS, PROMIS, and MS Project may be difficult and there may be better options later, but *right now* they are the only options.

We need to use the best tools available *today* and that's what we're doing.

I think you should know some more facts about the PMBP. The objectives of PMBP are to enhance service, provide a focal point for interface with customers, place emphasis on completing projects and programs rather than just individual products or phases, and enhance the Corps' reputation.

Some people think PMBP just adds another layer of management. I've heard that since my first district command and it's wearing thin. If you don't think we need to do a better job taking care of our customers, go read the beginning of this article again.

PMPB is the method. If you're not happy with the way project management (PM) has operated, that's okay, because we're changing how PM functions. PMBP makes many changes to the old PM processes. We need to get over our objections and move forward.

That's where we are. Are you going to jump in and help us make these changes, or wait until your branch loses customers and your future is decided for you?

Fuhrman becomes new deputy chief

Maj. Gen. Russell Fuhrman is the new Deputy Chief of Engineers and Deputy Commanding General of the U.S. Army Corps of Engineers He replaces Maj. Gen. Albert J. Genetti Jr. who retired June 1.

As Deputy Chief of Engineers, Fuhrman assists Lt. Gen. Joe Ballard, Chief of Engineers, in managing the Corps' missions, including the nation's civil works program, environmental restoration, and construction on military installations.

The Corps also assists during natural disasters, regulates work in the nation's waterways and wetlands, conducts research and development, serves as the Army and Air Force real estate agent, and provides engineering services to 60 federal agencies and 80 nations.

Before this assignment, Fuhrman was Director of Civil Works. Brig. Gen. Hans Van Winkle, the former Commander of Great Lakes and Ohio River Division, will take Fuhrman's place as Director of Civil Works.

Born in Shawano, Wis., Fuhrman graduated from the U. S. Military Academy in West Point and holds a master's degree in engineering from Pennsylvania State University. He is also a graduate of the U. S. Army Command and General Staff College and the U.S. Army War College.

Prior assignments include Deputy Chief of Staff, Engineer at U.S. Army Europe, and Commander of North Central Division. Fuhrman has also commanded at brigade and battalion level and held other command and staff positions with engineer units.

Maj. Gen. Russell Fuhrman
Deputy Chief of Engineers

His military decorations include four Legion of Merit Medals, three Bronze Star Medals, three Meritorious Service Medals, two Army Commendation Medals, the National Defense Service Medal, the Vietnam Service Medal, and numerous others. Fuhrman is a registered professional engineer in Virginia.

'Safety Pays' for Corps contractor

By Christina Plunkett
Jacksonville District

Jacksonville District rewards safety excellence. A contractor's on-going ability to build an extensive headwall extension with no lost-time accidents while dealing with many hazards has earned the district's first Semi-Annual Safety Pays Award. Custom Built Marine Construction, Inc., is the first contractor to be recognized by the district under its new Safety Pays Program.

This program is just what the name says. Government and contracted partners are awarded for proactive safety programs in a specific project or work process. Safety Pays is dedicated to having an accident-free workplace. "Not only do we want to turn over a project to our customers that is safe, but we want the project to be safe *during* construction," said Girlamo DiChara, Chief of Construction-Operations Division.

Although officially nominated for their safety performance from April to September 1998, Custom Built Marine has been building a headwall extension for Culvert 10A, part of the Herbert Hoover Dike Culvert Repair Project, since October 1997. When this contract was completed in April, it was the last of 17 culvert structures that received extensive operations and maintenance work in the Culvert Repair Project.

Rehabilitating Culvert 10A , unlike the other 16 culvert structures, involved adding five 9x7-foot culverts (steel pipes), to widen the Herbert Hoover Dike by 50 feet at the Levee 8 Canal. Culvert 10A allows water to flow under the dike at the L8 Canal location, which runs from Lake Okeechobee to West Palm Beach.

Although flood protection and navigation projects are work the U.S. Army Corps of Engineers is known for, this job was riddled with hazards that made Custom Built Marine's job more difficult, according to Chuck Wilburn, Project Engineer of the Gulf Coast Area Office. Wilburn, who nominated Custom Built Marine, oversaw the various stages and challenges at Culvert 10A.

Because Culvert 10A sits off Highway 441, Custom Built Marine had to maneuver their heavy equipment off the highway and across active railroad tracks. To ensure the safety of the workcrew and public, they implemented a detailed traffic control plan, working with the Florida Department of Transportation and the railroad. The contractor's flagmen controlled traffic along Highway 441 while cellphones provided continual communication between the railroad operators and construction crew.

A crowded work-site with a highway and a railroad in the background were some of the safety challenges Custom Built Marine Construction faced. (Photo courtesy of Jacksonville District)

A 56-kilovolt powerline running directly overhead added to the project's constraints. The crane operator had to maneuver the boom at contorted angles to avoid touching the line.

The project also involved placing large gabion baskets (which look like chain-linked fence formed into a basket filled with rocks or filters) underwater at the canal bank and bottom. The baskets control seepage by allowing water to pass through while retaining embankment and foundation material. Crane operators had to lower the baskets into the water while divers, going as deep as 14 feet, positioned the baskets. "Placing the baskets is like stacking dominoes underwater for the divers," said Wilburn.

"The amount of hazards and the mishap-free safety record for this project are truly noteworthy," said Frank Mohr, Area Engineer of the Gulf Coast Area Office.

Tornado

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Oklahoma had been dispatched to the scene to meet Logsdon.

At 3 a.m., the onsite cell for Emergency Support Function 3 (ESF-3), responsible for debris removal and utilities, was fully operational, with Logsdon heading it. About 30 federal, state, and local agencies, including the Corps, initially set up their emergency centers in the state EOC at the state capitol complex near downtown Oklahoma City.

By daylight on May 4, survey crews, equipped with maps of the entire disaster area, were on the ground identifying the extent of damage. By the time the presidential disaster declaration came, the Corps was already preparing for other taskings from FEMA — water distribution, power analysis, and debris removal and disposal.

Volunteers. Meanwhile, the ESF-3 was staffing up to support Tulsa District with volunteers from Fort Worth, Galveston, Little Rock, Pittsburgh, Nashville and St. Paul Districts for support in quality assurance, administration, public affairs, safety, and Southwestern Division liaison.

Debris removal from the 11 Oklahoma counties originally declared eligible for federal disaster assistance would soon take center stage, beginning with municipal streets, roads, and public property.

Following a presidentially declared disaster, jurisdictions have 72 hours to formalize an emergency services agreement to receive 100 percent federal funding.

To get debris removal efforts underway as quickly as possible, Pam Chronister, Tulsa District's Chief of Civil Contracts Branch, coordinated with Mobile District to tap into a prearranged Indefinite Delivery Indefinite Quantity contract that could be used for disaster situations.

In a hurry. "We needed debris removal in a hurry, and Mobile already had a contract with DRC, Inc., from Mobile, Ala., a company specializing in debris removal worldwide," Chronister said. "All we had to do was modify it to include Oklahoma and we moved right into negotiations. We saved at least 10 to 14 days because we didn't have to go out for emergency bids."

It was a race against the clock, but just hours before the 72-hour deadline, the Corps had a signed task order in hand with DRC. Later that day, the deadline was extended for 30 days, to June 3, to allow local jurisdictions more flexibility in planning their debris removal work schedules. Some communities decided to hire their own private contractors to do their cleanups.

To ensure local communities benefited economically from some of the debris work, the Corps encouraged DRC to use local trucks, equipment, and manpower to the fullest extent possible.

The initial estimate of debris was about 500,000 cubic yards on public property alone, but Logsdon expected it to be much more. "So the public would better understand how much that was, we had to give them something they could relate to. We told them the debris would eventually fill up a football field, piled 28 stories high."

Debris removal. Working closely with the state Department of Environmental Quality and the Environmental Protection Agency, the Corps identified a 40-acre plot for DRC to use as a debris-processing site. Located near a commercial landfill, this became the staging area where the hazardous waste, recyclables, and biodegradable materials would be separated. All non-recyclable items are being ground up to reduce their volume before they go into the landfills.

Mulhall. Along with other cities, the Corps' contractor is removing debris in Mulhall, Okla., population 200. Destruction was widespread. Every house and business in town was either destroyed or heavily damaged, but residents took little time for grieving.

"Mulhall set an example for other hard-hit areas," said John Wilson from Tulsa District, the resident engineer for the debris removal project. "When we got there to start picking up their debris from the rights-of-way, they had quite an operation going. Their people were organized and they were using the city's equipment to clear the debris from private property, moving it to the streets so we could come in and pick it up."

Mulhall Mayor John Pangburn said he was pleased with the Corps' efforts and that the town's citizens were anxious to start rebuilding. Getting rid of all the debris from their past lives was the first step in the healing process.

Fraud. Supervising the debris removal wasn't all the ESF-3 had to worry about. Within a week of the disaster, the state attorney general's office reported incidents of fraud. Several residents had complained that contractors, saying they were working for the Corps, had asked for payment for work done on public and private property at their homes. Consumer cautions were issued immediately through press releases and community relations flyers so no further problems occurred.

Work continues. Seven more counties have since been added to the presidential disaster declaration, bringing the total to 18 counties damaged by the storms.

As of this writing, the Corps continues debris removal and disposal in Oklahoma, and is awaiting other taskings from FEMA.

Dams are 'home sweet home' to bats

Article by Matt Rabe
Photo by Greg Smith
Portland District

Bats!

They are among the most misunderstood creatures on Earth. They are odd looking, mysterious creatures of the night can send chills down the spine of most people. Their role as characters in haunting folklore has helped establish popular misconceptions about their behavior.

But the efforts of some Portland District employees are helping dispel the myths about these furry little airborne mammals and clarify their role in maintaining healthy ecosystems.

Oregon's fertile Willamette Valley is home to 11 different species of bats. Bats hunt at night and sleep during the day. But during their nightly expeditions they require rest, and one of their favorite places to hang out is under bridges and on dams.

Yes, dams.

"Solar radiation is absorbed by the concrete of the dams during the day and then released at night," said Kat Beal, a wildlife biologist with Willamette Valley Projects. "This maintains a higher temperature than the surrounding environment throughout the evening, an attractive feature for bats."

So why is the U.S. Army Corps of Engineers, an agency known for building dams and dredging rivers, researching bats? Because understanding how and why bats use the dams will aid in the bats' survival.

Home sweet dam. To learn more about the bat populations in the Willamette Valley, the Corps is helping the bats set up housekeeping at dams in the valley. The bats have always hung around the Corps' dams and powerhouses, but were formerly seen as a nuisance and a problem. Biologists who once tried to keep the creatures out of the buildings are now providing habitat for them -- bat boxes fixed to the face of the dams.

"The tricky part about managing for bats is that people have legitimate concerns about working around bats," Beal said. "When we began our bat box program, we were concerned about making it okay for everybody. People are going into the areas where there are bats, so we needed to make sure they were comfortable about the situation.

This Brazilian free-tail bat rests comfortably on the face of a Corps dam.

"When we first put up the boxes, the question was whether or not the dams would attract bats to roost like bridges do," Beal explained. "After a short while we found out that, sure enough, they do."

Success. The bat boxes proved to be an immediate success. To the team's surprise, they found that the bats were using not only the bat boxes, but also the expansion joints in the dam.

Nine species of bats have been found on Corps dams and in project buildings. Eight were species common to the region, and one species, the Brazilian free-tailed bat, has never been found north of Douglas County, Ore., until recently.

Greg Smith, a student employee working out of the Willamette Valley Projects office and an Oregon State University undergraduate, said it is curious that this bat was found so far north.

"It's never been seen here in the past, so it forces you to ask if it has been here all the time and just been overlooked," Smith said. "That would be the easiest answer. The other possibility is that there is a movement, a trend, something bigger going on."

Smith pointed out that this particular bat is not rare or a threatened species in their range. He just wants to know why they are just now being found here, and to ensure the Corps' operations do not hinder the bat's activities.

Bat management. "If you're going to manage any kind of wildlife, you need to know what you are managing for," Smith said. "A decision could be made that would affect it, and if you don't know the animal is there, how do you know that whatever you are doing isn't having an adverse impact on that animal? As good wildlife managers, you need to know what you have nearby."

Beal agrees that the Corps plays a big role in the sustainability of bats and other wildlife on Corps projects. She said the Corps has a responsibility to operate the dams in a manner that protects the delicate habitat of all the plants and animals that call Corps land home.

"The reason it is important for bats to be able to use the dams is the proximity to foraging sites," Beal said. "There has been a huge decline in the amount of roosting habitat. It's like with any other animal. If they have to travel a long distance between their roosting sites and their foraging sites, they use up a lot of energy and that can create a hardship on the nursing young."

Beal said that bats are voracious insect eaters. They can eat up to 600 mosquitoes in one hour, and prey upon insects known to cause problems in forests and agricultural lands.

"The bottom line is if we want healthy forests, we must have healthy bird and bat populations because they are a critical part of controlling insect outbreaks," Beal said.

Vaccine offered against Lyme disease

By Bernard Tate
Headquarters

Many Corps personnel work outdoors where deer ticks are common, so this spring the U.S. Army Corps of Engineers implemented a Lyme disease prevention education and voluntary vaccination program. The new program is described in Engineer Circular (EC) 385-1-217, Lyme Disease Prevention Education and Vaccination Program, dated May 1. The program is similar to the Corps blood-borne pathogens prevention program where hepatitis B vaccines are offered.

The program has two primary components. The first is prevention education for employees who work in geographic areas where the two types of deer ticks that carry the Lyme disease organism are either established or have been reported.

The second component is voluntary vaccinations for employees who meet inclusion criteria and work in geographic areas the Department of Health and Human Services, Centers for Disease Control and Prevention (CDC) have determined have a high or moderate Lyme disease rate.

The Corps began this program for several reasons, according to Bob Stout, Industrial Hygiene Program Manager in the Safety and Occupational Health Office. The Food and Drug Administration recently approved LYMErix, the first Lyme disease vaccine. With a vaccine available, and the CDC and other federal and state organization making recommendations for vaccine administration, the Corps' Safety Office felt that offering the vaccine as part of a strong prevention program will significantly reduce the risk of Corps employees contracting Lyme disease.

The Safety Office partnered with the Natural Resource Branch to implement this program quickly. With endorsement from the Corps' contract board-certified occupational health physician team, Headquarters decided to implement the program to protect Corps employees this tick season.

The Corps will provide the vaccine free to all eligible workers. The employee can either accept or decline the vaccine by signing a form. Districts are responsible for managing their own program, and several flexible delivery mechanisms for vaccine administration are available. Several districts have begun offering vaccinations.

Eligible workers are those who:

- Work outdoors in geographic areas of high or moderate risk during Lyme disease transmission season.
- Engage in outdoor work where they are exposed to tick habitat (tall grass, brushy undergrowth, leaf litter, etc.)

Tick season is late April through August. Lyme disease is most prevalent in these states and geographical areas defined by the CDC – Connecticut, Delaware, Maine, Massachusetts, Maryland, Minnesota, New Jersey, New York, Pennsylvania, Rhode Island, Wisconsin, Vermont, New Hampshire, coastal northern California, eastern Oregon, eastern Washington State, coastal and southern Georgia, the Florida panhandle, and coastal South Carolina.

LYMErix vaccine produces antibodies again Lyme disease. When a tick bites, the antibodies attack and kill the Lyme disease organisms while they are still in the tick. The incidence of side-effects to the vaccine is minimal.

The vaccine is administered in a three-shot series. The second and third shots are given one month and 12 months after the first.

"The Corps is doing this because we feel that if we're exposing personnel to a hazard during certain outdoor work tasks, and if there are protective measures that can be taken, we're obligated to adequately educate and protect them," said Stout. "But vaccinations are just part of our prevention program. Prevention is first. Vaccination is a follow-on."

Techniques for prevention of tick-borne diseases include:

- Wearing long pants tucked into shoes or socks.
- Wear long sleeves with shirt tucked into pants.
- Wear light-colored clothing to make it easier to spot ticks.
- Treat clothing with repellent.
- Apply deet repellent to skin not covered by clothes.
- Check yourself and your partners for ticks routinely.

NASA decommissions old reactor

By Elizabeth Slagel
Huntington District

Building teams isn't rocket science, but Huntington District recently put together a multi-district team for a job with the National Aeronautics and Space Administration (NASA).

In February, the U.S. Army Corps of Engineers got word that NASA accepted their proposal to develop a plan to decontaminate and decommission a dormant NASA nuclear reactor facility in Sandusky, Ohio. Mark Kessinger, leaders of the Corps team that worked on the proposal, said they are writing a decommissioning plan that NASA and the Nuclear Regulatory Commission (NRC) will review.

"If we do a good job on writing the plan, hopefully NASA will ask us to do the work," Kessinger said. The nuclear reactor must be dismantled at a cost of no more than $65 million.

Pete McCallum, Chief of NASA's Environmental Management Office, said the reactor was used to test nuclear rocket propulsion systems, and the effects of radiation on spacecraft.

"In the early Sixties, the big thing was to get to the moon," McCallum said. "chemical propulsion allowed us to do that, so nuclear energy was put on hold."

Huntington District is writing a plan to decommission this reactor belonging to NASA. (Photo courtesy of Huntington District)

NASA kept the reactor for the possibility of still using nuclear energy. Later the NRC and NASA decided the facility would be best kept in safe storage to give radioactive materials with a short half-life time to decay.

Today, NASA is ready to dismantle the nuclear reactor. The Corps is writing the plan and stands ready to do the work. Kessinger said the Corps would benefit by adding another decontamination and decommissioning job to its resume, and it may lead to future work with NASA. "We're trying to position the Corps to be the leader for this type of work," Kessinger added.

NASA approached Headquarters about the Corps doing the work while announcing the project in the *"Commerce Business Daily."* According to Kessinger, the Corps' selling points with NASA were our work on decommissioning the Army's Research Laboratory Reactor in Watertown, Mass., and assisting the Department of Energy (DoE) in decommissioning the C-Reactor at Hanford, Wash., and the Chicago Pile 5 Reactor in Argonne, Ill.

NASA's reactor sits on the 6,400 acre Plum Brook site where Huntington District has worked with ordinance removal from a World War II explosives manufacturing plant. The Corps chose Huntington District to take the lead because of its locality, ongoing involvement with Plum Brook, and partnership with DoE's Federal Energy and Technology Center (FETC).

Since Huntington does not have all the capabilities to do the job, Kessinger organized a Corps-wide virtual team. The team consists of people from New England District who led the Corps' efforts to decommission the reactor in Watertown, and from Walla Walla District who supported the decommissioning at Hanford and Argonne.

Other team members are from Louisville District, the Great Lakes and Ohio River Division's Environmental Design Center, which will be the project's contracting agent and responsible for environmental aspects. The Hazardous, Toxic and Radioactive Waste Center of Expertise in Omaha District is providing additional environmental expertise.

Should NASA ask the Corps to dismantle the reactor, Buffalo District would staff the on-site project office and manage the construction contractor. Kansas City District would execute the off-site disposal of radioactive wastes.

Another key member is the FETC, DoE's agency for decommissioning the nation's nuclear weapons complex. FETC has participated in seven major decommissioning projects.

This virtual team will communicate by telephone, e-mail, video teleconferencing, and meet in person regularly.

While putting a human mission on Mars may be NASA's future, cleaning up old nuke sites could be the Corps' future if all goes well. DoE, Army, and Navy all have nuclear reactors that need decontaminating and decommissioning.

"We didn't even dream of NASA owning a reactor," Kessinger said. "This puts us in a position to be on the cutting edge of decontamination and decommission work."

"We've been impressed with the Corps' professionalism and eagerness to do a good job," said McCallum. "We've heard a lot of good things about the Corps' project management.

"Use of nuclear energy for space travel is still a possibility," McCallum added. Although the Plum Brook reactor is outdated, NASA still has other reactor sites. "If you want to go someplace like Mars in decent time, you'd want to use nuclear rockets."

The decommissioning plan will be turned over to the NRC for review next December. Dismantling the reactor is scheduled to be complete by 2007.

(Mark Kessinger also contributed to this article.)

Clean up method saves money

By Alicia Gregory
Photo by Jonas Jordan
Savannah District

The Marine Corps Air Station Beaufort had a problem; Savannah District had the solution.

In 1986, officials at Beaufort discovered a 1,500-gallon gasoline leak from an underground storage tank at the base gas station. Although the contamination is confined to a 150-by-100 foot area below the service station, base personnel decided that after about 10 years of studies and proposals they were ready to clean up the site.

The base considered several options including using a soil vapor extraction system, or allowing natural degradation of the contaminants. But the base didn't have money for expensive treatments, and they didn't want to wait decades for natural degradation.

Savannah District offered another option — Oxygen Release Compound (ORC). This new method chemically eliminates gasoline-related contamination of groundwater.

ORC is a magnesium hydroxide compound in powder form that reacts when mixed with water. The compound is injected into the ground at the base gas station to generate a chemical reaction and eventual bio-degradation of benzene, the carcinogen in gasoline.

"This is an inert material much like milk of magnesia with a special coating," said Tom Whitacre, geologist and district technical manager for the

Savannah District workers mix a batch of Oxygen Release Compound.

project. "You mix the powder in water and make a slurry. We then inject it into the subsurface. It gives off oxygen for a six-month period which will break down the contaminate.

This was the first time the process has been used by a Corps in-house team.

"We simply said we wanted this project done, got a cost estimate, and sent Savannah District the funds," said Frank Araico, Installation Restoration Program manager. The initial remedial design cost estimate for the project was between $150,000 and $250,000, but the district offered this alternative for $80,000. The savings were partially due to the base dealing directly with a federal agency without the expense of bidding process, contractor profits, modifications cost, and contract administration costs. Most of the savings were from the more cost-effective treatment.

The injection process took about a week. There were 110 locations throughout the contamination area. The district injected the material from depths of one foot to 10 feet in the contaminated area with a Geoprobe, a small-diameter tube with a high-pressure pump.

Two rounds of performance monitoring will be done after the injection, one two months after, and the other at six months. Then the South Carolina Department of Health and Environmental Control requires periodic monitoring for the next year or so to verify the contamination level has dropped.

"We don't have the in-house capabilities to do this work, and the district made it easy to use their assets," said Alice Howard, Natural Resources and Environmental officer at the air station.

"We did this ourselves with our in-house crews and in-house equipment," said Whitacre. "Our in-house capability is a plus for Savannah District. Many districts contract out this type of work, but you lose that technical edge if you don't do it."

"The project went well," said Araico. "They even finished two days early. The district did exceptional work."

Serve the Army

Focus energy on concerns of the Army leadership and challenges to the Army to serve the Nation.

Small office makes big impression

By Jennifer Wilson
Little Rock District

Sometimes, small offices on the front lines are the best example of what the U.S. Army Corps of Engineers is doing to support the Army today. That's the case with the Fort Chaffee (Ark.) Project Office just inside Little Rock District's western boundary.

"I consider us a full-service organization," said Tom Tadpole, a Contracting Officer Representative (COR) on environmental and JOC (job order contract) work at Fort Chaffee. "We do just about everything related to construction."

It may seem like a sweeping generalization, but that pretty much sums up the responsibilities of the small office at Fort Chaffee, an Army base closed by the 1995 Base Realignment and Closure Commission (BRAC).

Since Chaffee closed, Tadpole and Joe Holden have been busy with all types of work ranging from environmental cleanup to project construction. After BRAC, most of the base's land was licensed to the Arkansas National Guard and the Army Reserves. Another 7,000 acres were to be turned over to different federal, state, and local organizations but before the land could be released, it had to be cleaned up.

Little Rock and Tulsa districts are working together on the job. Tulsa District put two Total Environmental Restoration Contracts (TERC) in place in 1994 to cover environmental cleanup needs in Southwestern Division, so they provide the contracting officer, technical manager, and technical staff for the work at Fort Chaffee.

Since Little Rock District is on-site, Tadpole has COR authority on environmental construction work.

"Little Rock District provides quality assurance oversight, COR duties, pay voucher review, etc.," said Terry Murphree, Tulsa District's TERC project manager for Fort Chaffee. "When site investigations have to be performed, Tulsa takes the lead with assistance from Little Rock on a case-by-case basis."

The contract is a cost-plus contract that provides greater flexibility for the customer. Environmental cleanup work is uncertain, because you never know how bad it is until you get into it.

"This contract allows the government to pay for work performed, along with a guaranteed three percent profit and between five and seven percent award fee for the contractor," Murphree said. "It minimizes contract modifications and prevents claims down the road."

Tadpole and Holden actually share an office with the TERC contractor.

The old hospital buildings at Fort Chaffee are sealed with plastic sheeting during asbestos removal. (Photo courtesy of Little Rock District)

"We really are a team on this project, and because we're located together, it helps build team spirit," Tadpole said.

Murphree thinks the co-location increases efficiency, too.

"Decisions are made between the Corps and the contractor on a daily basis," Murphree said. "This usually allows quick decisions to be made, making the overall project more successful and sometimes even decreasing costs."

Little Rock and Tulsa districts have completed or are working on about $29 million in construction and investigative projects at Fort Chaffee. Projects include removing underground storage tanks and oil/water separators, a significant amount of asbestos abatement from the old hospital complex, abandoned fuel transmission lines and fuel pump yards, building above-ground fuel storage tank systems, and cleaning up several contaminated sites.

The most significant challenge for both districts has been working with the many entities involved with this BRAC process, from the Fort Chaffee customer, to state and Environmental Protection Agency regulators, to a wide variety of federal government agencies, the public, and the contractor.

"Due to the BRAC process and our focus on completing projects on a fast track, we have very involved customers who expect to be kept fully informed from start to finish, including all of the details," Murphree said. "For the most part, everyone's been pleased with the progress made to date, and the Corps has been recognized by the Army's Training and Doctrine Command for meeting all obligations."

"Although it wouldn't be fair to say that everything has gone smoothly at Fort Chaffee, the two districts have accomplished a lot," said Dan Clemans, resident engineer at the Little Rock Construction Resident Office, which is over the Fort Chaffee Office. "We've reached a point where the customer has confidence in both districts' work. Tulsa District has a great contracting vehicle in TERC. They provide great flexibility in investigation, design, and environmental cleanup."

To keep things running smoothly at Fort Chaffee, Little Rock District also has John Hogan in the Base Transition Office as BRAC program integrator.

In addition to environmental cleanup, Holden and Tadpole stay busy serving customers who have chosen to stay on Fort Chaffee. They use the local Job Order Contract, an indefinite-delivery/indefinite-quantity contract.

"The Fort Chaffee JOC originally was awarded in 1996 to close down the base," said Janet Holmes of Contracting. "Now organizations that are still on the base have heard about it, and they like the way it works. Our BRAC work is almost complete. Now we are spending more time working for others."

Holden is an old hand with JOC work at Fort Chaffee. Before joining the district in 1997, he worked for Fort Chaffee on the JOC. But in some ways, the district is busier with JOC work since the base closed.

"In the past, our main customer was the Army," Holden said. "During the past year, the biggest customer was the Department of Energy. They like Fort Chaffee, and they like working with us."

The Department of Energy's (DoE) Transportation Safeguards Division (TSD) has been on Fort Chaffee since 1985. The TSD is responsible for providing security for all government-owned nuclear material that is transported across the country.

"This area has been perfect for us," said Buddy Acoach, TSD manager at Fort Chaffee. "We try to train with or around military operations, because so much of our training is the same."

Fort Chaffee has become more attractive to DoE since the regular Army left.

"Now that the active duty troops no longer train here, we get free run of the training areas during the week, then the Reserves or the National Guard trains during the weekend," Acoach said. "It works out well for all of us."

DoE used Fort Chaffee's JOC to build their compound on the post, as well as a complete Military Operations Urban Terrain (MOUT) training area. The MOUT site looks like a mini-truck stop, complete with gas pumps, cars, a restaurant, and a store. It allows the agents to practice defending against ambushes that might occur during stops for food or gas.

"The Corps has been very responsive to our needs, from building our truck stop to getting us an observation tower where we can watch the exercises," said Acoach. "We love working with them, and will continue using them as long as we have the money to."

The next DoE job is to use JOC to enhance their arms room and vault.

"I attribute the success with DoE to Joe, who's an outstanding customer-oriented JOC manager, and to Del-Jen, Inc., who has really worked to maintain a satisfied customer base at Fort Chaffee," Clemans said. "Joe and Del-Jen have a can-do attitude that can overcome any problem. When DoE's funding comes through, they know that Joe will get it negotiated in quick order, Contracting will quickly execute the delivery order, and Del-Jen will quickly construct it."

Another big customer for JOC is the 120th Reserve Command from Fort Sam Houston in San Antonio. The 120th is converting old warehouses and vehicle bays at Fort Chaffee into offices.

Since October 1997, the local Fort Chaffee JOC has been used to complete $2.5 million work of projects.

Engineers face new Army XXI division

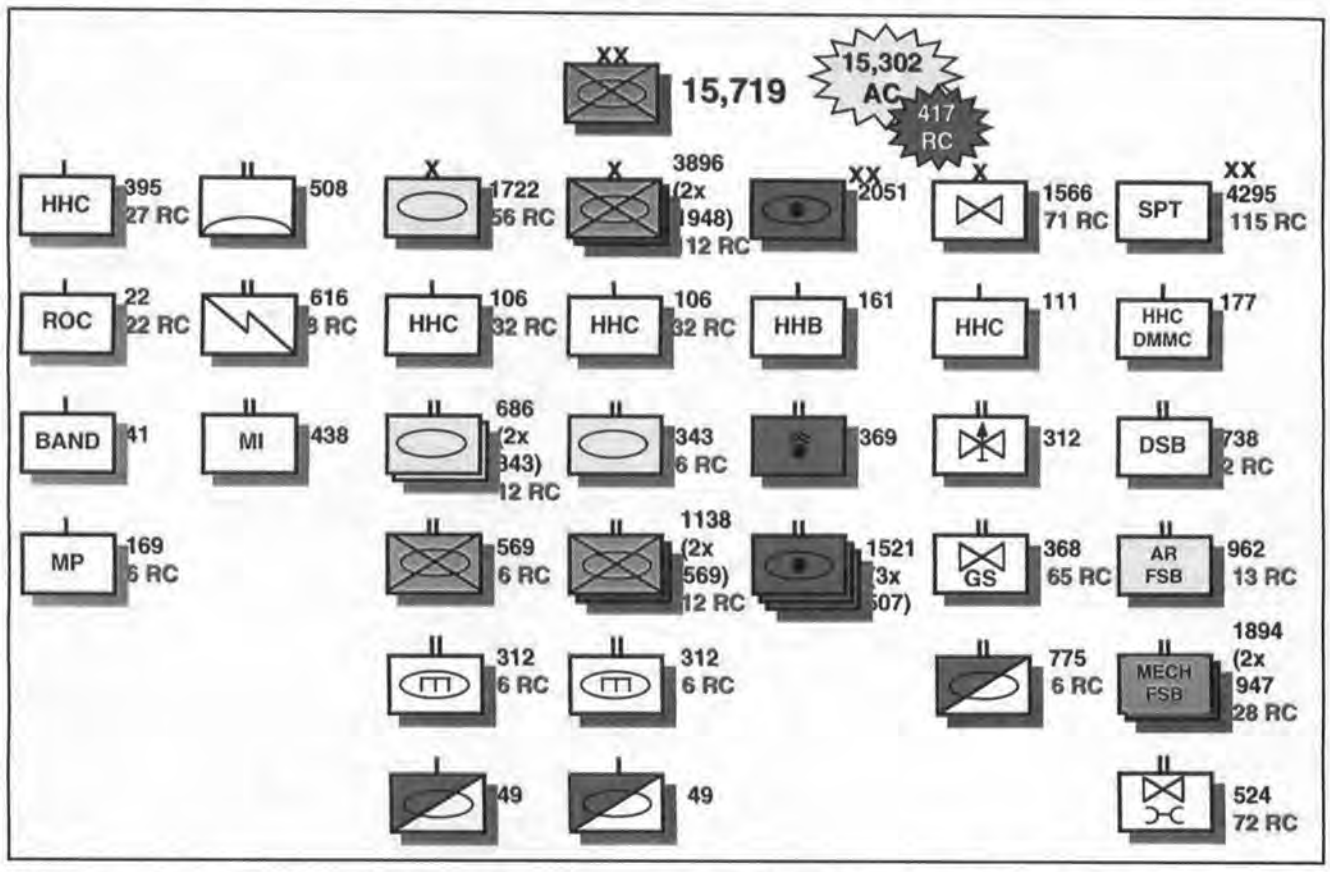
By Maj. Gen. Robert Flowers
Vern Lowrey
Col. Bruce Porter

Army engineers are deployed in more than 70 countries to support operations ranging from clearing landmines to producing terrain visualization products. In the coming months and years, Army engineers have another challenge — the Army XXI division.

Since 1993, the Training and Doctrine Command (TRADOC) has been restructuring for tomorrow's Army. Through numerous seminars, analyses, and Advanced Warfighting Experiments, we designed a new heavy division. In June 1998, Army Chief of Staff Gen. Dennis Reimer approved the Army XXI division design, fielded initially by the 4th Infantry Division at Fort Hood, Texas. The division started reorganizing last October and will be evaluated by a series of experiments and exercises culminating in a Division Capstone Exercise (DCX) in 2001 to validate the design.

Serve the Army

Former TRADOC Commander Gen. William Hartzog wrote in the July-August 1998 issue of *Army RD&A* that this division is "...unique because of its smaller size (about 15,000 soldiers), its smaller...combat elements (45 combat platforms in maneuver battalions), and its reliance upon digital technology and computers. Its size makes it more rapidly deployable. Its ability to share information...across the battlefield makes it capable of sustaining a rapid tempo of planning, preparing, and executing operations as well as sustaining and recovering from operations. Its modular organization contributes to its versatility for specific missions."



Engineer structure

The Army XXI division has three major changes in engineer structure:

- An engineer staff element is part of the division headquarters and headquarters company, versus the current separate division engineer brigade HQ.
- An engineer battalion is assigned to each brigade combat team (BCT) in the division, rather than being assigned to the division engineer brigade headquarters as it is today.
- All combat service support (CSS) (less medical) for the engineer battalion is provided by the base support company of the BCT forward support battalion, versus the current engineer battalion with its CSS.

Division engineer staff

The Army XXI division engineer staff element is under the control of the division engineer officer, who remains a colonel. The engineer staff is embedded in division command posts, currently the tactical and main command posts. They provide digital engineer input to division orders and write the engineer annex. The staff determines additional engineer capabilities needed from echelons above division (EAD) based on division requirements. The staff maintains situational understanding of the organic division and augmenting EAD engineer operations through division digital reporting procedures. All engineer staff recommendations flow through the division G-3 for action or decision by the division commander.

Heavy division engineer battalion

Army XXI division engineer battalions are now under the BCT commander. They support the commander's intent by providing responsive mounted obstacle breaching and emplacement. The Army XXI division engineer battalion is fully mounted and uses Grizzly breachers, Wolverine heavy assault bridging, and M-9 armored combat earthmovers (ACEs) in support of brigade offensive operations.

The Army XXI engineer battalion no longer has small emplacement excavators. It has one less squad per engineer platoon, no tactical command post capability, and fewer ACEs. The battalion can receive more engineers from EAD for increased obstacle reduction and creation capability, deliberate defensive operations, operations in restricted terrain, lines-of-communication construction, and maintenance and repair.

The Engineer School and 4th Infantry Division Engineer Brigade are evaluating using the M-2 Bradley fighting vehicle as an engineer squad vehicle to possibly replace the M-113 armored personnel carrier in Army XXI division engineer battalions.

The engineer battalion commander is dual-hatted as the brigade engineer and the engineer battalion commander. The engineer battalion provides an assistant brigade engineer (ABE) staff element in the brigade command post. The ABE provides digital engineer input to brigade orders and writes the engineer annex. He determines additional engineer capabilities needed based on brigade requirements and passes them to the division engineer. The ABE maintains situational understanding of organic and augmenting EAD engineer operations through brigade digital reporting procedures. The engineer battalion staff writes digital engineer orders to companies in support of task-force operations.

Training and leader development

Army XXI division engineers must continue to train with the combined-arms team and focus training on mobility tasks. The Army's increasing reliance on systems such as air Volcano, artillery-delivered scatterable minefields, and Raptor intelligent combat outposts require that engineers be well-versed in aviation, artillery, and intelligence

Increased training will be required for terrain visualization and digital engineer planning and execution using digital command and control systems.

Training with Army XXI division combat service support agencies will be required to sustain and maintain the engineer force. The noncommand operational relationship between the division engineer staff and engineer battalions under the BCTs must be fostered and developed in training.

EAD engineers must be included with Army XXI division engineer training at every opportunity, such as division warfighters, combat training center rotations, and during the DCX.

Many challenges will arise as we integrate Reserve medics and EAD engineers with Army XXI division engineer training. The Engineer School is developing strategies to assist Army XXI engineers with training and leader development, including Classroom XXI distance-learning capabilities, new training simulators, and digital doctrine and training products.

Materiel impacts

Army XXI engineers will have the same digital command and control technologies available to the division. These include appropriate Army Battle Command System components such as the Maneuver Control System, and Force XXI Battle Command Brigade and Below Systems. The Digital Topographic Support System will enable the Army XXI division to properly portray terrain in these digital command and control systems. EAD engineers supporting Army XXI will require similar digital command and control components to obtain and maintain situational understanding with the Army XXI division.

Soldier impacts

Army XXI division engineer soldiers must continue to master basic warfighting skills, which are pre-requisites for gaining digital proficiency. They will require increased skills in operating and maintaining digital equipment, because they will be required to maintain assigned equipment without ready access to mechanics and spare parts, in isolated locations without responsive security support.

Conclusion

The Engineer School continues to stay in the forefront of all actions associated with the standup, training, and validation of the Army XXI division design. Insights gleaned from our efforts will be used to ensure that engineers remain relevant with future light-force and strike-force redesign efforts. If you have questions, call Vern Lowrey at (573) 563-4082, or Pete Malley at (573) 563-7282.

(This article appeared in longer form in the November 1998 "Engineer" magazine.)

Corps supports Division XXI

The U.S. Army Corps of Engineers' support to the Army XXI division will be mostly at Echelons Above Division (EAD), including:

Terrain visualization. Each brigade combat team (BCT), the aviation brigade, and each division command post will have digital terrain analysis and data-management capability. This capability will be terrain analysis teams using the Digital Topographic Support System.

Obstacle reduction. The Army XXI division engineer structure provides minimal mounted capability to reduce obstacles. Reducing other obstacle systems in the area falls to EAD engineer units. They will create lanes through obstacles to clear logistics base sites for occupation and to open lines of communication (LOC). Bridge support will be provided by multi-role bridge companies from EAD.

Restrictive terrain operations. The Army XXI division requires extensive EAD augmentation for operations in urban areas. For engineers, this includes requiring dismounted sappers to aid reconnaissance and obstacle clearance in buildings. EAD engineer equipment will reduce and clear rubble along urban routes.

Deliberate defense operations. The Army XXI division engineer structure maintains minimal digging and dismounted sapper capabilities. They have only Volcano mine systems to support limited hasty defense operations. This means that EAD engineers must provide the heavy earthmoving equipment to support a division deliberate defense. Major EAD engineer tasks to support deliberate defense operations include digging vehicle fighting positions, dismounted infantry fighting positions, and conventional obstacles.

Force protection. EAD engineers will provide most engineer force-protection support, including building logistics-based security systems, clearing landmines and unexploded ordnance, building chemical decontamination sites, environmental hazard reme-diation, and camouflage, concealment, and deception support.

Construction, repair, and maintenance. The Army XXI division will operate in areas up to 200 kilometers (124 miles) wide and deep. This requires EAD engineer support to build, repair, and maintain extended division LOC facilities, bases, routes, ports, and airfields.

Seattle team builds family fun

By Dave Harris
Seattle District

Before the first youngster funnels through a water slide at Picatinny Arsenal, N.J., the $3 million aquatic center design and construction will funnel through Seattle District under the watchful eye of Kelly Lie and her nationwide team.

Lie is Seattle District's program manager responsible for executing the Army's Morale, Welfare and Recreation (MWR) facilities program throughout America. Owena Yang is project manager for the high-profile aquatic center.

The style of Lie and her team mirrors the aggressive program of the customer, the U.S. Army Community and Family Support Center (CFSC) in Alexandria, Va. The CFSC oversees the MWR program and expects cost efficiencies. Lie's team points to the financial partnership for the aquatic center. The local municipality is paying nearly half the bill, Yang says. "Without the partnership, there would be no project."

Serve the Army

While her grueling travel schedule would dissuade the fainthearted, Lie says she finds it "exciting rather than exhausting to be involved in pushing the leading edge of the PM model." She enjoys picking her virtual team from around the nation — a resident engineer from the geographic district, an architect-engineer (A-E) from another region, and a contractor from elsewhere.

Yang emphasized choice. "It can be a challenge working with other districts — especially if the issue comes up about 'playing in someone else's sandbox.' We can choose between a district or an A-E. But working with districts nationwide is our preference because it produces benefits of learning from each other. It's one door to the Corps. These kinds of exchanges make us all look good."

Lie says she likes visiting installations and working with MWR. According to her, the installation staff members are glad to get their projects, have a good outlook, are eager to work as a team, and they say "thank you."

Put all the projects together, and it's a full plate. There are:

- Bowling centers at Fort Belvoir, Va.; Fort Hood, Texas; and Fort Leonard Wood, Mo., costing from $2 million to $6 million.
- A $3 million youth activity center at Fort Sam Houston, Texas.
- Recreation centers at Fort Eustis, Va.; and Fort Wainwright, Alaska costing from $2.5 million to $4.3 million.
- A $3.2 million travel camp at Fort Meade, Md.
- $4 million golf clubhouses at Fort McPherson, Ga.; and Fort Belvoir.
- Golf courses at Fort Lee, Va.; and Fort Gordon, Ga., for up to $4 million.

These new log cabins built by Seattle District at Fort Lewis, Wash., can be reserved by federal employees. The cabins are part of the $4.2 million Northwest Adventure Center complex. (Photo courtesy of Seattle District)

- A $1.7 million auto skills center at Fort Riley, Kan.
- A $7 million two-level all-ranks banquet hall complete with two separate restaurants, pro shop, and golf cart storage at Fort Campbell, Ky.
- A $2 million upgrade of the serving facilities at the historic Officers Club at Fort Monmouth, N.J.

Yang adds that the team also gets involved with project validation assessment. They work with a financial contractor who determines up-front if projects are likely to be profitable. Project funding comes from soldier recreation fees and post exchange money. Facilities must turn a profit, which in turn pay for more facilities.

Lie says that she has three major motivations — partnering with CFSC's practice of pushing the envelope for design-build strategies that parallel commercial standards, and coaching a virtual delivery team rather than a team who already knows the ropes.

And Lie says the most significant motivator is knowing that everything she does, no matter how small, turns recreation facility dreams into reality. "It touches the families," she says.

Training land leased

By Alexander Kufel
Pacific Ocean Division

It takes a lot of land to train soldiers, especially infantry. Land for firing ranges. Land for realistic combat scenarios. Land to create the ruggedness of living and fighting outdoors.

The Army now owns about 8,000 acres of training land in Hawaii, thanks to the U.S. Army Corps of Engineers.

When Campbell Estate said it was willing to sell 8,000 acres of land in Kahuku, the federal government took the offer. The Army had leased the land for training since the 1940s.

After a friendly condemnation, both sides reached agreement and completed the sale. The $23.5 million purchase provides fee-simple ownership to 8,216 acres of land. Honolulu Engineer District (HED) handled the transaction through its Real Estate Directorate.

An HED economic analysis projected that buying would save the government $23 million during a 20-year period.

"If you're going to use the land, it's always cheaper to own it than to lease it," said Steve Stomber, HED Director of Real Estate, who managed the transaction.

Purchasing the property also assures the continued availability of a training area on Oahu. The Army has long considered the Kahuku Training Area essential. It is large enough to conduct tactical maneuver training at the company and battalion levels. Hawaii Army National Guard and Marine Corps units also train at Kahuku.

A 25th Infantry Division (Light) soldier trains on Oahu. (U.S. Army photo)

Factor in other costs, like transporting the 25th Infantry Division (Light) to the Big Island of Hawaii for training, and buying the Kahuku site looks like a great idea, said Stomber.

Purchasing may be cheaper, but not easier. In all, 107 easements were negotiated that affected nearly 400 acres.

Because the property did not involve any ceded lands and Campbell Estate was the sole owner, both sides agreed to clear any "title defects" by condemning the property. This avoided waiting for the 18-month land-court backlog to clear.

New child care center built in Germany

Article and Photo
By Marnah Woken
Europe District

An international team effort led to the successful completion of Darmstadt's new Child Development Center (CDC) in record time. Located in Lincoln Village, the $7.3 million facility opened in January. The CDC accommodates 244 children and was a high-priority project supporting the recent relocation of the 66th Military Intelligence Group from Augsburg to Darmstadt.

Construction began in December 1997. Just 13 months later, the center is open, making it the first Army CDC built in such a short time-frame. The new CDC provides full-time, part-time, and hourly care for children six weeks to six years of age.

Serve the Army

The nearly 20,000-square-foot facility offers a state-of-the-art kitchen, floor heating, central air-conditioning, separate modules for infants, toddlers, and preschool children, and a large playground area for different age groups.

The previous CDC was a converted World War II-era horse stable. "This is such a big improvement from the old center," said CDC Director Theresa Burke. "We have so much more space which allows us to offer more activities for the children. We've already received a lot of positive comments from parents about the new center. Just the openness and brightness in the design makes such a big difference."

The new CDC was built with the first Military Construction Army (MCA) money Congress provided for Europe since the military drawdown in the early 1990s. Due to the project's success, the design will be used for future similar projects in U.S. Army, Europe.

"The quick execution of this project justifies funding for new projects and gives credibility that execution can be done quickly and with high quality," said Pat Johnson, CDC Facilities Project Manager. "It was a pleasure to work with such a professional team. Whether it was Al Opstal and Bryan Jordan from Europe District, Sandra Zettersten from the Darmstadt Directorate of Public Works, the contractor Klee KG, the Staatsbauamt Darmstadt, or the design firm Weidleplan, it is the best team I've ever worked with for the design and execution of a CDC."

The interior and exterior design of the facility was completed by Weidleplan Consulting GmbH from Stuttgart under contract with the Darmstadt Bauamt.

"The first month of design was the most important," said Europe District Project Manager Al Opstal. "We established the footprint of the building by considering many design options and site constraints that required coordination with several stateside agencies. By being extremely goal-oriented, our real-time design period was only six months."

A playground surrounds the new Darmstadt Child Development Center.

Klee KG from Ilvesheim built the new center. Grounds for Play from Arlington, Texas, completed the design and construction of the playground, and the Fries Firm from Darmstadt completed the landscaping.

Opstal added that a solid partnership with the host nation construction and design firms contributed to the project's success.

"The Staatsbauamt Darmstadt did an exceptional job working with us on the center," he said. "This facility has state-of-the-art utilities and energy monitoring systems that are ahead of their time in the Darmstadt Military Community. The building is fully air-conditioned, which is common in the U.S., but unique in Germany."

Special child safety features can also be found throughout the facility. They include safety glass on windows, rounded wall and furniture edges, radiator covers, lower cabinets, and special water temperature settings.

"It's great to be a part of a project that makes children happy and gives parents peace of mind," said Sandra Zettersten, Chief of Contract Administration for the 233rd BSB DPW. "This project truly reflects the principles of partnership among planning, design, construction, and user elements. I'm very proud to be part of such a great partnering effort."

Because the center was built in the middle of Lincoln Village Family Housing Area, Zettersten says that safety was an important part of the project.

"Europe District Project Engineer Bryan Jordan was very proactive when it came to safety on the project and it paid dividends, as the record shows," Zettersten said. "He was instrumental in installing fences and walking paths, and rerouting traffic. He did what he could to keep everyone safe during construction."

Zettersten added that Jordan was instrumental in making the customer, and everyone involved with the project, part of the decision-making process.

"With any project, it's important to find out who will be using the facility and have them participate early in the construction process," said Jordan. "It's also very important to find out who will be participating in the final inspection and make sure they're on-site on a regular basis as soon as the walls go up. It's also important to try to gain time on the schedule, even at the beginning. You never know what surprises might come later."

"This project was a success due to a team effort and Europe District's vision of faster and better," said Opstal. "We all put our minds to the task and remained focused on the project throughout."

Plastic lumber serves fort well

Article by Candice Walters
Photo by Staff Sgt. Wayne Hall
Fort Belvoir

Environmental planners continually strive to ensure that construction and training on Fort Belvoir, Va., does not interfere with Mother Nature's delicate balance, especially in the environmentally sensitive Jackson Miles Abbott Wetland Refuge.

When they began planning to renovate the habitat area and make it handicap accessible, they looked for materials that would not only blend in with nature, but also last a long time and be good for the environment.

Enter plastic lumber — designed to look like the real thing, but made out of plastic milk jugs and bottles, about 116 jugs per eight-foot 2x6-inch board.

"You're taking materials that would stay in the landfills for years and turning them into a useful product that will stand up to the elements and maybe last as long as 50 years, maintenance-free," said Marcia Kicos, environmental specialist with the Directorate of Installation Support.

Workers from the Construction Engineering Research Laboratories (CERL) built the project. They used plastic lumber for three fishing pier railings at Mulligan Pond, a 12x14-foot wildlife observation deck at the refuge, and a 24-foot boardwalk leading to the observation deck. The deck will have a bench, also made of plastic lumber.

Ordinary power tools can be used to work plastic lumber

The refuge work is a demonstration project by CERL and Rutgers University to show construction materials made from plastic lumber are feasible for a number of projects. This is the second time CERL has demonstrated this type of project; the first was a bridge at Fort Leonard Wood, Mo.

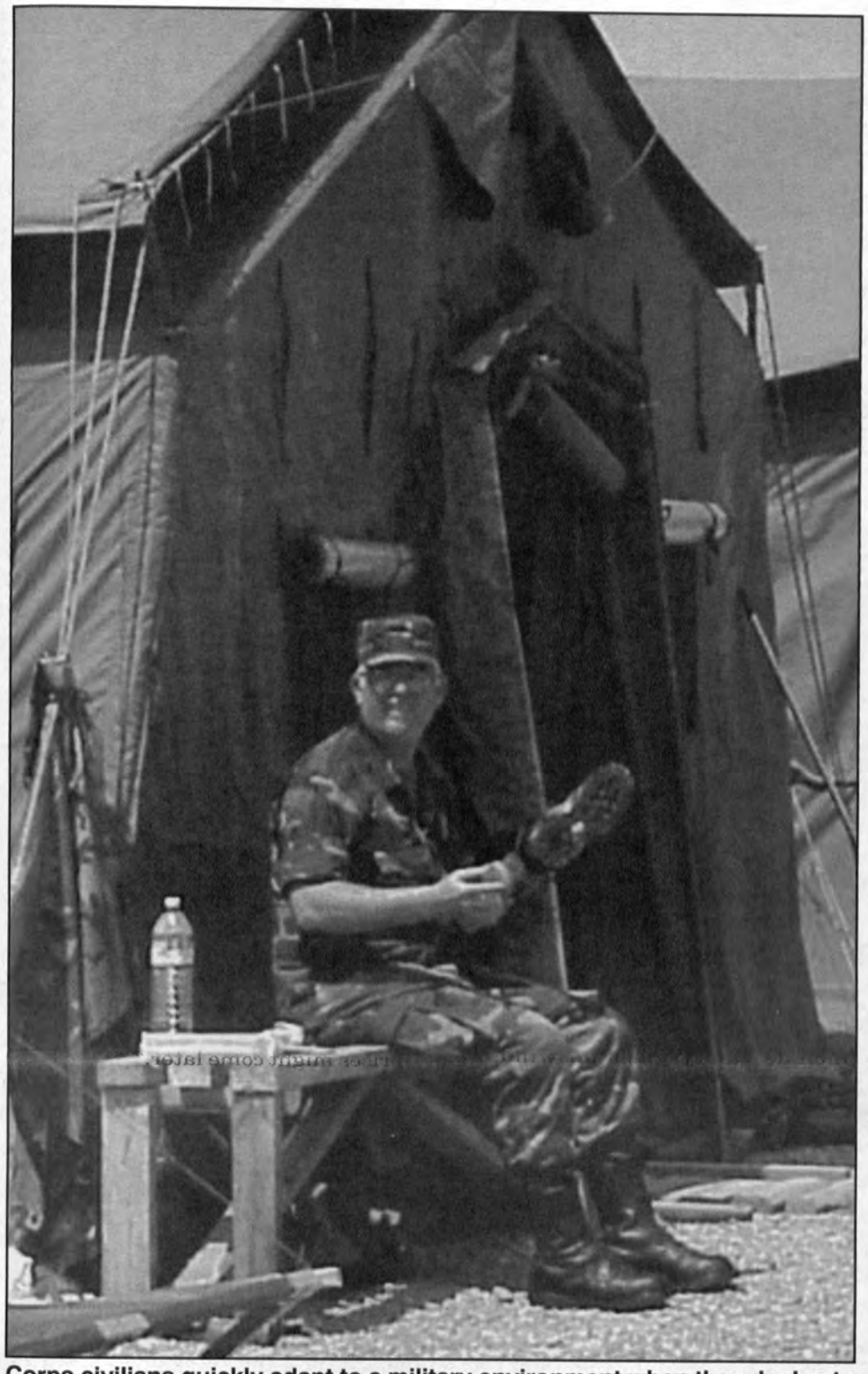
The plastic lumber, which looks like cedar, is expected to last so long because it's not as porous as wood, won't fade, is immune to insects and wood rot, and won't splinter.

"There are billions of pounds of these materials in landfills," said Richard Lampo CERL material engineer. "Projects that show you can build large structures will divert a lot more plastic materials from the landfills than just park benches and picnic tables," which were earlier uses of plastic lumber.

(Candice Walters is the editor of the "Belvoir Eagle" at Fort Belvoir, Va.)

Corps people join troops in Albania

Photos by Erich Schuette, Europe District



Corps civilians quickly adapt to a military environment when they deploy to Albania. Dr. Al Bush from the Waterways Experiment Station sleeps in a tent, keeps his boots clean, and keeps his water bottle close at hand.

There are scenes that are common to any war-zone. Above, local kids learn to mimic soldiers, while civilian herds graze near military tents close to Triana airport. Note the heavy artillery behind the children.

This is the view from the Corps of Engineers' forward-deployed office in Triana.

Soldiers assemble tents in Triana.

FBI asks Corps to find live grenade

Article by Bob DiMichele
Photo by John Younghans
Huntsville Center

Sometimes all you can do is scratch your head and wonder where you can go to get help. The Federal Bureau of Investigation (FBI) recently faced that situation when it came across a possible unexploded grenade in a pond in rural Tennessee. The agents just didn't know where to call to safely remove the grenade, but they found out that the Engineering and Support Center, Huntsville, could solve the problem.

An individual had bought a 60-acre farm in Tennessee with cash. That type of all-cash purchase got the FBI's attention, and an investigation found the cash could be tied to illegal activities. So the FBI confiscated the property and found automatic weapons, grenade launchers, and antique swords. An informant told the FBI that the former owner also threw some hand grenades into a pond.

The FBI planned to auction the property and needed to be certain it was safe for sale. So the agents had the pond drained and called for a military explosive ordnance disposal (EOD) team. But the EOD team could not find the grenades. If any were there, they had sunk into the mud in the bottom of the pond and were not accessible.

This was a big problem. Army EOD teams do not search for *potential* unexploded ordnance; they only respond to located items. And the FBI does not handle military explosives.

So the FBI looked for an organization with expertise in finding and removing old buried munitions, and they found the ordnance expertise of the Huntsville Center.

Greg Bayuga and John Younghans, both ordnance safety specialists at Huntsville Center, came into the case. Bayuga said the pond, which was about 40 yards by 30 yards, had sufficient time to dry and the soil was ideal for searching for unexploded munitions. So the search did not take long.

Bayuga and Younghans arrived May 3 and began their search using a magnetometer, a sophisticated metal detector. Almost immediately, Younghans found a grenade. He said, "Even though the magnetometer told you were it was, you couldn't see it until you were right on top of it. The grenade just blended into the mud."

The munition was a fuzed Danish fragmentation grenade. The next day, they systematically searched the entire pond without finding any more unexploded ordnance, and the 717th Ordnance Company, EOD, from Fort Campbell, Ky., safely detonated the lone grenade in place.

Gary Bayuga, an ordnance safety specialist at Huntsville Center, carefully examines a live grenade at the bottom of a drained pond.

Corps gets ready for 'Millenium Bug'

By Homer Perkins
Headquarters

Y2K.

What is it? What will it do? And what are we doing about it?

The Year 2000 (say Y2K), sometimes called the Millenium Bug, is a computer problem. In simple terms, computers that are not Y2K compatible use only two numbers for the year and compute the date as MM DD, 19YY. That means they will read 2000 as 1900, and everything done by the computer will not be recognized.

The doomsday crowd predicts dire events will occur at midnight Dec. 31 — electricity generating plants will stop, planes will fall from the sky, your car won't run, your TV and VCR won't play — your basic end-of-the-world problems.

The U.S. Army Corps of Engineers has a vigorous program to thwart those problems. A detailed review of automated systems and equipment included a complete inventory and assessment of automation devices, and a comprehensive compliance verification process. The Corps continues to pursue Y2K compliance issues and to work with business partners, customers, and other federal agencies to increase awareness of Y2K issues.

As a result, no serious Y2K disruptions are anticipated. Operations centers will actively monitor our infrastructure systems during the change. If any problems occur, prompt response will ensure services are not disrupted.

Almost all Corps districts and offices have made plans to handle Y2K, but a few stand out.

In Transatlantic Programs Center, all architect-engineer and construction contracts were reviewed for Y2K compliance, and all equipment is Y2K compliant. That includes every PC, fax machine, cell phone, the phone system in the computer room, every file server, the elevator to the second floor, the satellite phones, the pager — more than 1,000 gadgets.

Tulsa District formed its first Y2K Team in 1998. A Y2K Readiness Survey is the basis for a database to track equipment and systems, prioritize risks, and track Y2K testing progress. The database was shared with other districts at a Fall Regional Y2K Team meeting. All powerhouses will be staffed in case they must go to manual operation next Jan. 1, and again next Feb. 29 — another date some computer programs will not recognize. Contingency plans are in place for flood control systems, water supply, and navigation.

Fort Worth District also tested everything, but they went a step farther. They have a rigorous public affairs program of speaking engagements, public meetings, news releases, news and feature interviews, and staff briefings.

Portland District can run all the powerhouses manually without any reliance on automated systems. The Dalles Project, for example, is running

Army completed Washington Monument

Article by Martin Gordon
Photo by Bernard Tate
Headquarters

When Congress decided the federal government should finish the Washington Monument, it turned to the U.S. Army Corps of Engineers.

The debate about how best to memorialize President George Washington began soon after his death in December 1799. A group of prominent Washingtonians organized the Washington National Monument Society in 1833 to design, finance, and build the nation's monument to Washington. While raising funds, the society selected Robert Mills, a noted architect, to design the memorial. Mills' design was a towering stone obelisk, with a circle of columns around the base.

But Mills' design was controversial and fund raising went slowly while Congress discussed a site with the society. As the discussions continued, Congress became concerned about the beautification of the National Mall and gave the society land for a monument. Interestingly, this site was almost the exact location Army engineer Maj. Pierre L'Enfant had recommended for a monument to Washington in his 1792 master plan for the federal core of the city.

Construction finally began with the laying of the foundation in 1848, but political, engineering, and financial difficulties slowed work. Work finally stopped in 1854 as the shaft reached 152 feet.

For 24 years, the stump of the obelisk sat unfinished on the National Mall. Both the society and Congress repeatedly studied the work that had been done and planned to resume construction. Several times they asked the War Department to send an engineer officer to study the plans, especially the shaft's foundation. The society and Congress were worried about how well the foundation could support the weight of the monument, and how well it was holding up while work was suspended.

For example, in 1859 Lt. Joseph Ives reassured his audience that the foundation showed no signs of settling or defects. Ives did find a few chipped blocks near the bottom of the shaft, but he felt they could be covered up in the base of the completed monument.

In 1873, as the 100th anniversary of the U.S. drew near, Congress renewed its interest in finishing this highly visible commemoration of George Washington. Almost three years later, and after extensive press criticism, Congress finally appropriated money to resume work on the monument and assumed federal responsibility for its completion and operation.

Clad in scaffolding, the Washington Monument is undergoing it first major renovation since the Corps completed it 115 years ago.

But Congress still worried about the weight the monument's foundation would support and asked the U.S. Army Corps of Engineers for more studies. Eventually Congress asked the Corps' Board of Engineers for Fortifications, because of its experience with large projects, to evaluate the plans for completing the monument.

Meanwhile, in 1867, as post-Civil War attention turned to the city of Washington, the Corps established the Office of Public Buildings. Accountable to the President as well as the Chief of Engineers, this office was responsible for the Mall and parks areas, including their statues and memorials. Lt. Col. Thomas Lincoln Casey became the first head of that office, assisted by civilian engineer Bernard Green. Completing the Washington Monument became their first major project.

They restudied both the plans and construction they inherited from the society. They agreed with Congress'concerns and redesigned the project.

Casey and Green enlarged the foundation to take the shaft's estimated final weight of 81,000 tons. The foundation grew from its original 6,400 square feet to more than 16,000 square feet, while its depth increased from about 23 feet to nearly 37 feet. That change involved replacing about 51 percent of the original foundation while not disturbing the nearly 32,000 tons of the partially completed structure that rested on it. They also corrected a deflection of 1.4 inches in the unfinished shaft

Meanwhile, Casey fended off many unsolicited ideas to redesign the classically simple obelisk to conform to Victorian ideas of decoration. Casey and Green studied the classic obelisks of the Roman, Egyptian, and Greek empires. They finally fixed its height at 550 feet both to conform to ancient rules governing the relationship of the height of an obelisk to its base and to insure that it was the tallest structure in Washington when it was completed.

Casey started rebuilding the foundation as soon as he received permission in October 1878, and began completing the obelisk in 1880. In August, his workmen laid the first stone at the 152-foot mark where work had earlier stopped. And on Dec. 6, 1884, in a small ceremony atop the monument, Casey, Green, and their workmen laid the capstone with its aluminum apex, completing construction of the Washington Monument, as we know it today.

The Corps, through the Office of Public Buildings and Parks and its successors, took care of the Mall and park areas of the District of Columbia until 1933. That year, President Franklin Roosevelt transferred responsibility to the National Park Service, which still maintains those public parts of Washington, D.C.

However, the work of the Corps endures. The Washington Monument is currently closed for renovations, the first major overhaul since the Corps completed it 115 years ago. The monument is scheduled to reopen to the public next January.

Millenium

Continued from previous page

as if it were 1957 — all manual, no automation because of system upgrades. They are tentatively planning a media day at a dam to show how the power system can continue to operate after midnight, Dec. 31.

Great Lakes and Ohio River Division moved its focus to developing Y2K contingency plans after completing its testing and replacement program. Their Y2K program managers visit one installation in each district to determine the progress being accomplished on Y2K. As part of their unique plan for generators, they require sites to turn off their electricity and run on backup generators for 24 hours.

Pittsburgh District has already completed this Y2K-for-a-day exercise. They shut off power for 24 hours at all flood control and navigation projects and used backup generators. All sites can run for five days without commercial power.

Seattle District and the Bonneville Power Administration have worked together since 1995 to test and correct systems to ensure an uninterrupted flow of electricity from Corps dams. Mayney Mason, the district's Y2K manager, believes private citizens will notice little change in the new year. "Even if there were brief local outages, any appliance that comes back on by itself after a routine power outage won't be a problem when power is restored," Mason said. "You may have to reset the time on alarm clocks, VCRs, microwave ovens, but they'll work."

Norfolk District established a Y2K Team in 1998. The original team of planners evolved into a team of doers as the critical date approaches. They have partnered with other military installations, municipalities, public utilities, and with industry to identify common problems and solutions in Hampton Roads.

Much of this preparation may be just a worst-case drill. Some prophets of Y2K doom said the first bad effects were to have taken place in late 1998 as air travel reservations and software projecting market trends began to compute with dates in 2000.

It didn't happen.

The European conversion to the Euro (standard currency) was supposed to be an indication of the trouble banks would face with Y2K.

The conversion was completed in two days, with no problem.

April 1, when the United Kingdom, Japan, Canada, New York State, and many large businesses changed to fiscal year 2000, was supposed to foreshadow the monumental difficulties Y2K will bring.

No problems were noted.

On April 9, the first "Artificial Date" computer systems were to go haywire because April 9 was Julian date 9999, and programmers used 9999 to indicate "end of file," or "delete this file," or other devastating things.

It came and went without incident.

Other government agencies are ready, too. The Office of Personnel Management says all checks will go out on time, most electric power companies believe they will continue to provide power, and the Federal Communications Commission says there will be no major disruptions in telecommunications, radio broadcasts, satellite, or cable.

But even if Y2K is a dud, some lessons have been learned. Take this comment from Tulsa District — "We've learned many lessons in meeting Y2K challenges. This project exemplified matrix management. We have a clearer understanding of the interrelationships between divisions/offices and the overlaps in our mission programs. Information and knowledge we've gained about how we work together, how our work overlaps, how our facilities support that effort, how our customers (internal and external) and ourselves interface, how well we can respond to local, regional, and global challenges, will serve the district well in areas unrelated to Y2K."

Japanese government worker trains in U.S.

By Doug MaKitten
San Francisco District

"Oh, East is East and West is West, and never the twain shall meet..." wrote Rudyard Kipling. But East did indeed meet West and the outcome was good when San Francisco District assisted in a training program for Rieko Nagata, an employee of the Nara Prefectural Government (similar to a county government in the U.S.) While in San Francisco, Nagata worked with the Readiness Support Center and the Information Management Office.

Her experience was part of a year-long training program which included comparative government studies at England's Oxford University, and at New York's Pace University.

Nagata said the program is an example of the prefecture's determination to meet today's challenges.

"Each year the Nara Prefectural Government selects one employee between 27 and 40 years of age to study the government systems of the U.S. and the United Kingdom," said Nagata. "I applied for the program and I was fortunate enough to be selected.

Perspective. "The idea is to broaden our point of view and use what we learn when we return to Japan," Nagata continued. "Working in a different culture and seeing my country and our government from the outside has opened my eyes and my perspective. That will help me understand the needs of the prefectural government's customers so I can prepare customer-oriented policies and projects."

Nagata wanted to work with the Corps to research performance measures and information management capabilities, especially the Internet. A contact between one of her former professors at Osaka University, where she majored in English, and Corps Headquarters, made this happen.

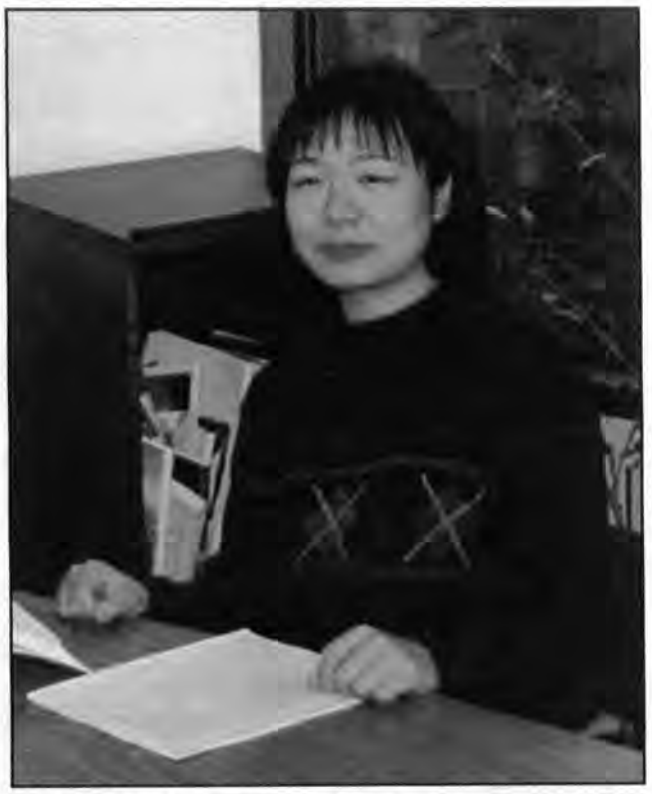
"Performance measures and information management are key issues to provide services effectively and efficiently," said Nagata. "The economy has been bad so long in Japan, taxpayers are watching government spending more carefully than ever. We are required to change to be more effective and efficient, and my studies here in the U.S. will help us develop a more effective strategic plan."

With the Readiness Center, Nagata learned about the office's missions, policies, and procedures and developed spreadsheets on a variety of topics, but she spent most of her time with the Information Management Office working with librarian and webmaster Frank Conway.

"Rieko wanted to learn about designing and troubleshooting web pages, designing graphics, scanning documents, and using a UNIX server," said Conway. "She had some programming background, so HTML was a logical progression. Since she is such a quick learner, I gave her progressively more complicated tasks."

Personal time. Nagata used her personal time in the U.S. to see and do as much as possible. She also continued conversational English studies to increase her language proficiency.

"When I was attending Pace University, I saw a lot of the East Coast, including Washington, D.C., Boston, and Philadelphia," said Nagata. "I was particularly impressed with Washington. I had almost a religious feeling seeing the home of democracy, and monuments and exhibits about Lincoln, Washington, and Jefferson."



Reiko Nagata, a Japanese government worker, trained in the U.S. for a year. (Photo courtesy of San Francisco District)

Big differences between U.S., Japanese offices

By Doug MaKitten
San Francisco District

Rieko Nagata saw many differences between U.S. and Japanese government work and office conditions.

"As a government employee in Nara Prefecture you are transferred from one division to another every three to five years," said Nagata. "You are expected to be a generalist, not a specialist. I worked one year in general affairs, and another year on immigration matters before coming to the U.S."

Nagata had difficulty adjusting to something most American workers demand — privacy.

"In Japan, we work in one big room, with our desks face-to-face," she said. "In this way it is easier to know what others are doing and to communicate and collaborate on projects. Here, working in my own cubicle, it sometimes made me feel lonely.

Another surprise was American work hours.

"Most people here come to work early and leave early, while in Japan, people go to work later and work much later," Nagata said. "It's nice to have time on your own after work, but I just can *not* get up early!"

Nagata said she liked working in a smoke-free office in the U.S., a rarity in Japan, and having her own telephone and computer with Internet access. In Japan such tools are often shared.

She also liked the fact that the U.S. government doesn't have an office lady system in which women employees are expected to serve tea, empty ashtrays, and wash cups. That is a common practice in Japan.

Electronic security excellence is Huntsville goal

By Linda James
Huntsville Center

The Electronic Security Systems (ESS) team of the Huntsville Engineering and Support Center is building a reputation for excellence one customer at a time.

Proof of their success is in the significant growth of the program in the past several years. The ESS program for fiscal year 1999 is projected at about $17 million. According to John Brown, the team's technical lead, customer care is largely responsible for their success.

"We've seen some pretty phenomenal growth this year, but the team has worked consistently to provide the absolute best service to our customers," said Brown. "Word travels fast when your customers are satisfied."

The customers Brown refers to include the Bureau of Engraving and Printing, the Federal Bureau of Investigation, and the Smithsonian Institution. The ESS team's relationship with the Smithsonian has grown substantially over the years, according to Brown.

"Initially the Smithsonian considered us a cadre of specialists," he explained. "But now, that relationship has changed and the Smithsonian has effectively made us their *agent* for electronic security. Which means we are heavily involved in the planning, design and acquisition of electronic security systems for Smithsonian facilities both in and out of the Washington, D.C. area. One of those facilities is in Panama."

Of course, the team is accustomed to working in countries all over the world. Support to Department of the Army and other customers requires that ESS team members travel to places such as Japan, Korea, Bosnia, Germany, and the Middle East.

The ESS team will add to their long list of regular customers when the Bureau of Reclamation (BuRec) and Huntsville Center finalize an agreement this spring for ESS support. BuRec, part of the Department of Interior, owns and manages hundreds of dams in the Western U.S., including Hoover Dam. "The Bureau has become increasingly concerned about threats to critical infrastructure," said Brown.

Once the support agreement is signed, Huntsville Center will do site surveys to identify security vulnerabilities and make recommendations to reduce those vulnerabilities. Then, through an indefinite delivery-indefinite quantity contract already in place, the ESS team can buy and install the systems required to fill BuRec's needs.

According to Brown, this "cradle-to-grave" service is key to building the ESS team's customer base.

"We supply our customers with a one-stop service that's quite unique and very cost effective," said Brown. "Since we have competitors within the federal government who would love to serve our customers, we live and die by our ability to provide a high quality reimbursable service at the lowest possible cost. You know, the kind of service that people come back for. Every ESS team member understands that and it shows."

Around the Corps

General officer news

Maj. Gen. Russell L. Fuhrman is the new Deputy Chief of Engineers and Deputy Commander at Headquarters. He will be replaced as Director of Civil Works by Brig. Gen. Hans A. Van Winkle, Commanding General of Great Lakes and Ohio River Division. The reporting date is to be determined.

Brig. Gen. Robert H. Griffin will transfer from commanding General of Northwestern Division to Commanding General of Great Lakes and Ohio River Division, report date to be determined.

Brig. Gen. Carl A. Strock will transfer from Commanding General of Pacific Ocean Division to Commanding General of Northwestern Division, report date to be determined.

Maj. Gen. Jerry L. Sinn will transfer from Commanding General of North Atlantic Division to the Director of the Army Budget, Office of the Secretary of the Army (Financial Management and Comptroller) in Washington, D.C., report date to be determined.

Trailers donated

On April 16, the Corps donated 34 trailers to the Fairfax County school system for classroom space. This fall, they will become 14 classrooms at Glasgow Middle School, and seven classrooms at Glen Forest Elementary School.

The Corps originally installed 21 trailer units in late 1970's as temporary space to house the Finance and Accounting Office and other offices until the Casey Building was built. During the years, the trailers were home to several different Army offices. In 1987, 13 more units were installed.

When the last tenant moved out in 1998, the Corps contacted the Defense Reulitization and Marking Office for disposal. DRMO advertised the units as excess property and drew some interest, but no takers.

The Facility Management Office estimated that demolishing the trailers and returning the site to its original condition would cost about $199,000. DRMO contacted the Fairfax County School Board and asked if the units could be used as temporary classrooms.

Officials of the Corps and the Fairfax Count schools officially made the transfer during a ceremony on April 16. The transfer will save the federal government an estimated $150,000, and Fairfax County an estimated $1 milllion.

World War I vet honored

Ralph Latson, 103, is one of about 1,000 living veterans of World War I. Recently the former engineer soldier received the French National Order of the Legion of Honor for his service.

The Hon. Guy Yelda, Consul General of France, presented the medal in Los Angeles on the 80th anniversary of the signing of the armistice.

Dr. Fred-Otto Egeler represented Los Angeles District at the ceremony and presented Latson with a framed engineer flag and a letter signed by District Engineer Col. John Carroll.

Latson enlisted in Los Angeles in March 1918 and left for France in September with the American Expeditionary Force. He served as a Private First Class in Company D of the 319th Engineering Unit, 27th Infantry Division.

Assisting others

St. Louis District has been helping the St. Louis Housing Authority (SLHA) and the Housing and Urban Development's Troubled Agency Recovery Center (HUD-TARC) in Cleveland.

In 1998, SLHA began inquiring about Corps capabilities beyond construction inspection. After several meetings between SLHA and Corps representatives, SLHA determined that the district could provide timely, efficient contract administration support. SLHA and the district began negotiating a deal with representatives from HUD-TARC.

Included in this initial deal was a review and comment on four construction contracts and one architect-engineer contract, plus the usual HUD inspection services. Last November, SLHA set up an office for four Corps employees. Because of a shortage of resources, Louisville District provided three people.

These individuals, led by St. Louis District's Dave Mueller, identified $700,000 in savings to the SLHA. They also negotiated a contract modification for SLHA, identifying further savings. The Corps' asisstance cost SLHA just $70,000.

A second work order through the HUD/COE Nationwide agreement is currently in the works. Once that is finalized, St. Louis District will receive $48,000, bringing their total funding for SLHA support this fiscal year $203,000.

WISE award

Lynn Marie Bocamazo, Senior Coastal Engineer with New York District, earned the Women in Science and Engineering Achievement Award for her engineering contributions. These included her involvement with the nation's largest shore protection project, and employing pioneering numeric modeling, which advanced the science of coastal engineering and the Corps' reputation.

Bocamazo received the award April 26 during the annual WISE Conference in Arlington, Va.

Computer donations

You've just been issued your brand-new office computer. Ever wonder what happens to your old one? In California, they often go to school kids or law enforcement officers.

Since 1995, San Francisco District and Headquarters, South Pacific Division have donated about $750,000 worth of equipment, most of it going to San Francisco area schools. So far in fiscal 1999, they have donated automated data processing (ADP) equipment worth about $138,000 to the schools.

In the past year, they have also donated $17,250 of excess ADP equipment to law enforcement, including the Sonoma County Sheriff's Department, and the San Jose, Long Beach, and Montebello police departments.

"The impact is pretty dramatic," said Ray Porter, a resource teacher with the San Francisco Unified School District. "The need for technical equipment, like computers, far outstrips our budgets. The equipment donated by the Corps and others meets a direct need and saves us budget dollars."

Field dedication

During ENFORCE XXI, the Corps dedicated a baseball complex to the memory of Col. Robert Morris, former Kansas City District Engineer.

More than 200 engineers, colleagues, friends and family members were present April 30 as Lt. Gen. Joe Ballard, Chief of Engineers, and Morris' widow, Linda, unveiled a bronze plaque.

Morris served the Corps and the Army for 24 years, including a tour as Deputy Chief of Staff at Headquarters. He retired from active duty in January 1998, and died of cancer in May 1998.

"It has always seemed to me that the truest recognition is that which comes from the hearts of friends and colleagues," said Ballard. "By dedicating this baseball complex to the memory of Bob Morris, we are recognizing his spirit of competition, his zest for life, and his service to the nation."

First Lady recognition

First Lady Hillary Clinton honored Aniela Baj, daughter of Sophie Baj, an environmental scientist in Buffalo District's Environmental Analysis Section. Aniela was one of a group recognized as community heroes by Clinton during her address to Western New Yorkers. Afterwards, Aniela met the First Lady and was photographed with her.

Aniela, 14, developed and directed a summer program for children age 6 through 12 at Lincoln Playground on Buffalo's East Side. The program ran for seven weeks and involved about 75 children. She arranged career awareness meetings, a weekly computer lab, and several field trips.

Productivity award

Three people at the Huntsville Engineering and Support Center have earned the Department of Defense Productivity Excellence Award. This award recognizes individuals or small teams that develop innovative processes which save taxpayers money. Three Huntsville Center employees saved more than $40 million during the past six years with their simplified process of renovating military medical facilities and federal buildings with energy conservation needs.

Thomas Sykes, Emily Durham, and Plyler McManus developed a process that eliminates voluminous contractor design requirements and reduces the amount of government review of contractor work plans while assuring quality.

Farm workers

The Lake Sonoma staff, working with the California Employment Development Department (EDD), completed backlogged maintenance work at Lake Sonoma by finding a state program to get the work done at no cost to the Corps.

The La Cooperativa Campesina de California Flood Program, funded by the state and coordinated by the EDD, provides work for farm workers who lost their jobs because of flood damage to crops. Rich Ward, maintenance leaderman at the lake, contacted EDD and made arrangements to get a La Cooperative Campesina work crew.

The crew of 10 Hispanic workers spoke little English. Julian Navarro, a Lake Sonoma maintenance worker who speaks English and Spanish, trained and supervised them for their six months at the lake last summer.

Under Navarro's guidance, the crew built foot bridges, installed culverts and drainage ditches, cleaned out and unplugged culverts and drainage ditches, helped plant 200-plus trees at a campground, and installed an irrigation system for the trees.

Amazingly most of the crew had never even used a hammer before.

"You can imagine the look on their faces when I told them they were going to learn to use chainsaws, mulchers, drills, and other power tools and, most of all, to learn to use them safely," said Navarro.

By the end of the summer, the La Cooperativa crew had become proficient with the tools and developed new skills. Their work saved the Corps about $140,000 in maintenance costs.

Above left, a still shot from "Saving Private Ryan" shows Harrison Young in the cemetery at Normandy. Right, Young chats with Maj. Gen. Albert Genetti Jr. former Deputy Chief of Engineers, during a visit to Corps Headquarters last year. (Left photo courtesy of Dreamworks. Right photo by Thorpe Mealing.)

Meeting 'Private Ryan'

Former Army engineer officer played vital role in hit movie

By Bernard Tate
Headquarters

"Tell me I'm a good man. Tell me I've led a good life," James Ryan tearfully begs his wife at the end of "Saving Private Ryan."

Harrison Young, a former Army engineer officer, played the modern James Ryan in the emotional scenes at the beginning and end of the movie. Based on a true story during D-Day, the movie sends a team of Army Rangers across the battlefield to find and bring out Pvt. James Ryan, the last survivor of four brothers fighting in World War II. The reassurance of Ryan's wife in the cemetery at Normandy is the only thing that makes sense of the Rangers' seemingly senseless mission and their terrible loss of life.

Young got the role partly by skill and partly by looks. He had endeared himself to Steven Spielberg's casting director by being willing to take two-line parts, so she called Young when the part of James Ryan came up.

According to an article in a Los Angeles newspaper, Spielberg reviewed photos of hundreds of actors to find one who looked like an older version of Matt Damon, who played the younger Pvt. James Ryan.

"I found Harrison Young, who I knew. But could he act?" Spielberg says in the article. "I had him do a reading and he broke my heart. I was very lucky to find him."

And Young says that he enjoyed working with Spielberg.

"He's absolutely wonderful to work with," Young said. "Extremely warm and pleasant young man. When I met him, it was like meeting an old buddy that you hadn't seen in 10 years. No barriers between us at all.

"We shot the scenes in the cemetery on Sept. 12, 1997," Young continued. "When we landed in London, the weather was sunny and warm, not a cloud in the sky. But the morning we went to Normandy to shoot the scenes in the cemetery, it was cold and raining. Which was appropriate for filming in a cemetery, of course. I asked Steven, 'Did you arrange this?' He grinned and said, 'I've got some pull.'"

Harrison Young, third from right, hangs onto his helmet during Engineer Officers Candidate School in 1952. (Photo by Edgar Gornet)

The weather was not the only thing that did not have to be faked for the cemetery scenes.

"The cemetery at Normandy will just break your heart," said Young. "In the first scene of the film, where we're walking up the road and turned to enter the cemetery, my God, the movie doesn't do it justice. All those ranks and ranks of white crosses. About 6,000 boys died during the Normandy invasion. The tears just started to come, *poof,* in buckets. It'll tear your heart out. During one break in the filming I walked over to the next row of crosses and saw right there two kids, 18 years old, killed Dec. 25, 1944. Merry Christmas, Mother, your son's not coming home.

"At one point I walked to the edge of the cliff and looked down at where the landing craft had come in on D-Day," Young continued. "My God, that was no place to fight a battle. There was no place to go. There was just a cliff that went straight up 150 feet. From up there I could see the sandbars where the landing craft stopped, dropped their ramps, and soldiers wearing 60-pound packs went straight to the bottom."

"Saving Private Ryan" is an emotionally powerful movie, especially its realistic combat scenes. Being involved with the production did not lessen the impact for Young.

"My agent and I went to see the film together," Young said. "Afterward, we had planned to have dinner and a big celebration. But that movie just ripped our hearts out. We were so wrung out that we didn't feel like having dinner, so we just went home."

Young saw it the first time in a special screening for the cast and crew, but he's seen it twice more at regular theater screenings. "There were some old veterans in the audiences that walked out with tears in their eyes," Young said. "I have friends who were in the service then, and World War II veterans have called me, and they all say the battle scenes in 'Saving Private Ryan' were close to how it really was."

Young has some military experience of his own. He was drafted in 1951 and scored high enough on the tests to qualify to be an officer. In 1952 went though Engineer Officers Candidate School at Fort Belvoir, Va., home of the Engineer School before it relocated to Fort Leonard Wood, Mo., in 1988.

"I feel like I spent three years in basic training," said Young of his hitch in the Army. "I spent three years either being trained or training troops, so I was hiking up the same hills they were hiking up."

Young said his Army experience gave him insight into how James Ryan felt.

"The Army helped me understand discipline and camaraderie," Young said. "I understood why the younger Private Ryan wouldn't leave his buddies at the bridge, even though he knew that trying to hold it was just about a suicide mission and the Rangers were offering him a free ticket home. And I understood the sadness that the modern James Ryan felt when he remembered the sacrifices his buddies and the Rangers made for him."

After serving in Germany, Young left the Army and returned to his hometown of Port Huron, Mich., to work in construction. His wife introduced him to community theater and he got bitten by the acting bug and performed in at least one play a year.

"One evening I was watching television and I said to myself, 'Hell, I'm as good as they are.' At the age of 38 Young went to New York City to begin a career as an actor. He has appeared in numerous movies and television shows, including "The Game" starring Michael Douglas, "Primary Colors" starring John Travolta, "ER," "Law and Order," and "Beverly Hills 90210."